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[54] **DENSE STAR POLYMERS HAVING CORE, CORE BRANCHES, TERMINAL GROUPS**

[75] Inventors: **Donald A. Tomalia**, Midland; **James R. Dewald**, Bay City, both of Mich.

[73] Assignee: **The Dow Chemical Corporation**, Midland, Mich.

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[58] **Field of Search** 528/363, 310, 328, 332, 528/331; 564/153, 155, 468, 509; 560/155, 169, 171, 215; 525/451

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Primary Examiner—Harold D. Anderson

[57] **ABSTRACT**

Dense star polymers having terminal group densities greater than conventional star polymers exhibit greater and more uniform reactivity than their corresponding conventional star polymers. For example, a third generation, amine-terminated polyamidoamine dense star polymer prepared from ammonia, methyl acrylate and ethylenediamine has 1.24×10^{-4} amine moieties per unit volume (cubic Angstrom units) in contrast to the 1.58×10^{-6} amine moieties per unit volume contained by a conventional star polymer. Such dense star polymers are useful as demulsifiers for oil/water emulsions, wet strength agents in the manufacture of paper, and agents for modifying viscosity in aqueous formulations such as paints.

14 Claims, No Drawings